

REMARKS

The Examiner's Action dated December 29, 2004, has been received and its contents carefully noted.

Regarding the indication in section 1 on page two of the Action, claims 79-84 have been canceled, along with claims 40-58 and 68-84.

The rejection of claims 21-24, 27-34 and 37-39 as anticipated by Brown is respectfully traversed. Referring, firstly, to claim 21, this claim has been amended to clarify that the module according to the invention is intended for coupling a telephone device to a digitized voice channel carried over bus topology wiring in a building. The module includes a local area network modem couplable to the wiring and operative to communicate with at least one identical modem over the wiring in the building.

Support for the reference to at least one identical modem will be found in the Specification at page 18, lines 10-12. Obviously, if each of the outlets mentioned at that portion of the Specification contains the module shown in Figure 11, they will all contain identical modems. The fact that the invention is directed to wiring in a building is disclosed in the first paragraph of the Specification. The bus topology of the wiring is described in the Specification, for example at page 15, line 19. The fact that the invention relates to local area networks is apparent from the numerous references in the BACKGROUND OF THE INVENTION portion of the Specification to local area networks and to the fact that the module according to the invention is for use with wiring in a building. A network within a building is always considered to be a local area network.

Claim 21 distinguishes over the applied reference by its recitation that the module is used to couple a telephone device to a digitized voice channel carried over bus topology wiring in a building.

In contrast, the applied reference, Brown, is clearly directed to a wide area network that involves communication over a subscriber loop (Specification, column 1, lines 10-13, column 1, line 66 to column 2, line 24 and column 2, lines 54-62). Communication technologies such as DAML, DSL and DSL are known in the art to be WAN technologies. It is well recognized in the art that there is a clear difference between local area networks and wide area networks. For example, local area networks connect units that are in close proximity to one another, such as within a building, while wide area networks are used to establish communication over a larger geographical area, and in particular among remote buildings.

As shown in Figure 1 of Brown, the modem 108 in the subscriber premises communicates with the platform 101 located in a central office, which is physically located in another building distinct and far away from the subscriber premises (column 1, line 66 to col.2, line 24). Such a WAN modem is required to deal with different transmission challenges, as described at column 1, lines 38-45 and column 4, lines 56-59, and thus must be different from modem 108.

Claim 21 has been amended to define a modem operative to communicate with an identical modem in the same building.

In WAN systems in general, and subscriber-loop transmission systems in particular, there is a clear distinction between the two communicating modems: The exchange (CO) side modem, and the remote modem in the subscriber

premises. For example, relating to timing and synchronization, the CO-side modem is considered as the 'master' (e.g. controlling the timing) and the remote, subscriber side, is considered as the 'slave' (e.g. locks/synchronized to the master timing). Hence, the two modems are not interchangeable or identical, and must be provided in pairs. Two CO-side modems will not communicate with each other, nor will two subscriber-side modems of the type required to implement the system disclosed by Brown.

The above is demonstrated in the Brown patent. The CO-side modem 101 and the subscriber-side modem 108 are clearly distinct from each other. Relating to timing control, for example, CO-modem 101 clearly determines the timing and synchronization (signal 8K_NTR) as shown in Figures 2, 3 and 5, and described at column 7, lines 65-67 and column 9, lines 23-36. The subscriber modem 108 synchronizes voice packets and reconstructs the transmitted 8K_NTR as shown in Figures 6 and 7, and described at column 11, lines 26-33 and 51-53, and column 4, lines 19-26.

Conversely, LAN systems commonly employ identical modems throughout the whole communication system. Such configuration is described in the application, as there is no distinction between the modems used.

As such, claim 21 was amended to include only modems operative to communicate with other identical modems.

It is thus submitted that claim 21 defines patentably over Brown at least by the recitations that: the module is provided for coupling to a channel carried over a bus topology wiring; in a building; and a local area network modem operative to communicate with at least one identical modem over the bus topology wiring in the building.

Claim 22 has been amended to further define patentably over the applied reference. Claim 22 now specifies that the wiring is composed of conductors in the walls of the building and comprises a service plug to which the modem is coupled and that is connectable to a mating service jack.

The amendments to claim 22 are fully supported by the Specification of the present application, particularly by the illustrations in Figure 13 and the accompanying description in the Specification.

Brown is silent about the manner in which modem 108 is to be connected to the wiring (connections 109 and 102 in Figures 1 and 6). While connection of a telephone set (or any other telephone -POTS- equipment) to an outlet using an RJ-11 plug/jack is known, connection of the telephone company to the subscriber loop (such as the DAML system described by Brown) commonly employs fixed connections (commonly at the NID - Network Interface Device), which are usually hidden from the subscriber. Furthermore, existing subscriber telephone 114 is shown in Figures 1 and 6 to connect to the subscriber loop 102 via filter PF 116, while the modem 108 connects via added wiring and connection 109. Hence, additional wiring is required, and use of existing in-home wiring for the additional telephone connections is not disclosed in Brown.

In Brown, "the POTS service is fully retained" (column 4, lines 1-2, column 6, lines 63-66, column 12, lines 39-44) via wiring 102. The derived modem 108 is connected to wiring 109, which is distinct from the existing in home telephone wiring. Brown is silent about connection to any existing outlet.

Claim 30 is directed to a module that includes at least one exchange line interface couplable to a telephone service signal and a modem coupled to the exchange line

interface and operative to couple the service signal to the signal carried over the wiring.

In the present application, and in the art to which the present invention relates, there is a clear distinction recognized between a 'subscriber line interface' and an 'exchange line interface'.

A 'Subscriber line interface' is designated as 72 in the present application and as 600 in Brown, and is used to convert a digital telephone signal to an analog telephone signal that can be supplied to an analog telephone, such as in Figures 7 and 12 of the present application, and Figure 6 of Brown.

Distinctively, an 'exchange side interface', designated as 81 in the present application, connects to a central office (rather than to an analog telephone set) and converts an analog telephone signal to a digital signal.

As shown in Figures 2 and 3 of Brown, and as described at column 8, lines 58-67, the exchange/CO side connection of the system described by Brown is made via connections 105, which involves connection to multiple DS1 signals. DS1 signals are **multiplexed digitized telephone channels** (...direct digital PCM trunk connection..., column 5, lines 41-43 and column 7 lines 5-7) and do not represent an analog telephone connection as described in the present application.

Thus, those skilled in the art would understand that modem 108 of Brown is not connected to an exchange side interface. Rather, derived voice modem 108 of Brown comprises a 'subscriber line interface' 600 shown in Figure 6 of this reference, but this modem 108 is not connected to, or does not comprise, an exchange side interface.

The rejection of claims 59-62 as anticipated by Frankel is also respectfully traversed. Claims 60 and 61 have been canceled and their subject matter has been incorporated into claim 59. Claim 59 has been further amended to more clearly define the contribution of the invention over the applied reference.

Claim 59 is directed to a module for coupling a telephone device to first and second wiring segments. As defined in claim 59, at least the first wiring segment is local area network wiring in a building. The module is composed of first and second modems each couplable to a respective wiring segment. The first modem is operative to communicate with at least one identical modem in the building over the first wiring segment and the second modem is couplable to the second wiring segment. Support for the recitation of "identical modem" is identified earlier herein in the discussion of the rejection of claims 21 et seq. The module further includes a subscriber line interface to convert one voice channel to a first analog telephone signal and a first telephone connector coupled to the subscriber line interface and operative to couple the telephone device to the first analog telephone signal.

In the explanation of the rejection, the Examiner has equated the module of claim 59 to the WC RDT 500 shown in Figures 8 and 9 of the reference drawing.

In point of fact, the system disclosed in the applied reference, and particularly the component designated WC RDT 500 is different in kind from the module defined in claim 59. Firstly, at least one wiring segment of the module defined in claim 59 is a local area network wiring. There is no disclosure in the applied reference that any wiring associated with the structure shown in Figure 9 of the

reference is a local area network wiring. Figure 8 does illustrate a LAN 12, but this is connected to RDT 100, and is not part of the latter component.

Furthermore, at least the first modem of the module defined in the claim 59 is operative to communicate with at least one identical modem in the building. The only modems shown in Figure 9 of the reference are DSL modems and neither of these modems is connected to communicate with at least one identical modem, an essential reason for this being that a DSL modem is incapable of communicating with another identical DSL modem. More generally, DSL modems are a type of modem that are employed in Wide Area Networks and no modem employed in such a network can communicate with an identical modem. Here again, reference is made to the discussion presented earlier herein in connection with the rejection of claim 21.

It is therefore submitted that claim 59 defines features that are clearly not disclosed by Frankel, so that claim 59 cannot be considered to be anticipated by that reference. Claims 62-67 should also be considered allowable in view of their dependency from claim 59.

The rejection of claims 25, 26, 35 and 36 as unpatentable over Brown is traversed for the reason that the limitations presented in these claims are in no way disclosed in or suggested by the teachings of the applied reference.

Claims 25 and 35, as now amended, specify that the module is dimensioned to be mountable in an outlet cavity in a wall, while each of claims 26 and 36 specifies that the module is at least in part housed within an outlet. In the explanation of the rejection, the Examiner appears to acknowledge that Brown does not disclose any of these features, and concludes, without any supporting evidence or explanation, that it would have been obvious to modify the

system of Brown by shifting modem 8 in any location of the subscriber premises.

In order to support such a rejection, it is necessary that the prior art reference itself teach or suggest all the claim limitations. MPEP sections 2142 and 2143. While it is acknowledged that it might be possible to install modem 108 of the reference in an outlet cavity or to house it at least in part in an outlet, the fact is that there is no disclosure or suggestion of such a possibility in the applied reference itself. Moreover, with regard to the Examiner's assertion that this would "provide an efficient and convenient communication system for the users", the Examiner has not cited any evidence that those skilled in the art would have been aware that such benefits would be gained. Once the invention has been disclosed, it is a simple matter to appreciate its benefits. However, in order to support the rejection in question, there must be evidence of prior art knowledge of such benefits.

Accordingly, it is submitted that these claims define patentably over the applied reference.

The rejection of claims 63 and 64 as unpatentable over Frankel is respectfully traversed, essentially in view of their dependency from claim 59 and for the reasons set forth above with regard to the rejection of claims 25 et seq. As the Examiner acknowledges, the applied reference, Frankel, does not disclose the features defined in those claims and the Examiner has not cited any evidence of prior art knowledge that could be considered to suggest constructing the Frankel apparatus to include the claimed features.

Moreover, the fact is that the wire center remote digital terminal 500 of Frankel is, as the name indicates,

intended to be located in a wire center and not at a customer site.

It is therefore submitted that claims 63 and 64 clearly distinguish patentably over the applied reference.

The rejection of claims 65-67 as unpatentable over Frankel in view of Brown is also respectfully traversed.

It is submitted, firstly, that claims 65-67 should be allowed in view of their dependency from claim 59.

Moreover, it would appear that the Brown reference discloses a system that differs fundamentally from that of Frankel and it is not seen that any evidence or explanation has been presented to support the view that one skilled in the art would have any motivation to modify Frankel in accordance with any teaching of Brown, particularly with regard to the features defined in claims 65-67.

Accordingly, it is submitted that these claims also define patentably over the applied references.

Dependent claims 85-89 have been added to further define the contribution of the invention over the prior art. Each of these claims depends from a previous claim that is believed to be allowable, so that these claims should also be considered to be allowable. Particular attention is drawn to claim 85 which includes a positive recitation of modules having identical modems, each being operative to communicate with all other modems of the other modules.

Claim 87 also includes the recitation that the modem of claim 30 is operative to communicate with at least one identical modem.

Claim 88 depends from claim 21 and specifies that the module further comprises means for detachable electrically and mechanically coupling the module to an outlet connected to the wiring. In other words, the module defined in claim 88 is

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a unit that can be plugged into an outlet. There is no disclosure in the art of record of a module having this capability.

In view of the foregoing, it is submitted that all of the claims now pending define patentably over the art of record and it is therefore requested that all of the rejections be reconsidered and withdrawn, that claims 21-39, 59, 62-67 and 85-89 be allowed and that the Application be found in allowable condition.

If the above amendment should not now place the application in condition for allowance, the Examiner is invited to call undersigned counsel to resolve any remaining issues.

Respectfully submitted,

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